1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34

[p. 13a]

197 Probably no group of Tarascans has great difficulty in understanding any other group. As Tarascan has not been subjected to intensive grammatical analysis, thus far no affiliations for the language have been seriously proposed.

105 To summarize the discussion, the Tarascans appear to be fairly typical of the plateau Indians of Central Mexico in type, but they speak a unique language. Both anciently and today

[text continues on top of p. 13b]

TECHNOLOGY

EXPLOITATIVE ACTIVITIES

128 In this section are described the techniques of the Cherán Tarascans for the exploitation of the environment. With a few exceptions, manufacturing processes, the uses to which the products are put, and the economic system into which they enter are discussed in later sections.

COLLECTING

222 *Plants.*—No food plants are collected regularly. Recourse is sometimes had to edible greens in times of starvation or as an occasional means of bringing variety into the diet. Most useful plants, except medicinal herbs, exist in the town in virtually a semidomesticated state. [263] This is particularly true of the most commonly used plants such as kulántro (*silantro*),[2] the most frequently employed herb for flavoring food. [278] Similarly, *manzanillo*, probably the most generally used medicinal herb, is to be found in every garden. Discussion of these plants can therefore best be deferred to the discussions of medicine and the house gardens.

A small wild maguey growing in the mountains and in the *malpais* (lava flows) is collected from November to May. [252] The heart is roasted in pit ovens and sold.

222 412 One minor commercial enterprise, formerly of some importance, is collecting *raiz de paja*, the roots of a coarse grass. The roots are cut off and carried to Cherán, where they are carefully laid out in rows on sunny, dry days. After drying, they are tied in bundles for sale

[104] [2] Tarascan words are in Roman and Spanish words are in Italic unless they are in frequent English usage. Spanish words with special local meanings are in quotation marks.

[text continues on middle of p. 13b]

222 clear honey is desired, it may be strained
237 through silk. The native wild combs contain
no wax. The larvae are sometimes eaten,
[262] either toasted in their cells or fried. The latter
[252] method of preparation involves picking the larvae out of the cells. Yet another method is to toast the larvae with onion, chile, and salt. The latter method is said to be especially tasty, but probably only *panaleros* ever use any of these methods very often.[8]

222 The larvae of another insect, the *traspanal*
262 (*jicotera* in La Cañada), are also collected and eaten occasionally. This insect resembles the native bee but is a little larger and makes its nest in the ground to depths of 1 meter (3 ft.) or more. No other animal food is collected and the use of the eggs of wild birds was denied with every evidence of distaste.

USE OF MINERALS

316 Stone, volcanic cinders, and clay are the three mineral resources utilized in Cherán. Tuffs and lavas are employed for house building, foundations, and fences. The materials occur either in the town itself or in barrancas within a few hundred yards of the town. Volcanic cinders are also quarried out of the sides of barrancas, often within the town, and are em-
[991] ployed to spread over slippery places on trails, streets, and yards. The supply of materials far exceeds demand, and the public domain affords all needed supplies.

Most of the rock used in Cherán comes from a quarry on the west face of the hill of Santa Karákua (also called Santiákujákua) within the village. Most of the rock is prised out of the upper face of the quarry in large pieces, which usually are broken up in the fall to the foot of the quarry. The broken rock is then placed in piles, which later comers will not molest. Smaller rocks and spalls are abundant and anyone may help himself to these.
[492] The rocks are usually packed by tying them on burros with ropes, while small pieces may be placed in nets or in pack boxes.

317 Clay is somewhat more scarce. It is used only for tilemaking and brickmaking, as no
[323] one in Cherán makes pottery. A sufficient supply of clay for all present needs is dug out

[184]

[8] At Sopoco in La Cañada, Rendón was told that the larvae are sometimes eaten raw.

243 and none at all to stop attacks of weevils or bee-
251 tles. There are no mechanical corn shellers in Cherán, and bulk sales of unshelled maize are often made. Small amounts may be shelled for sale to storekeepers if there is need of a few cents in cash. One common method of shelling corn is to bind corncobs tightly with wire or cord to make a bundle about 12 inches in diameter. Maize ears are laid on the floor and rolled with this crude implement.

Black maize usually is not completely husked. Instead, pairs of ears are tied together and hung over poles in the house. The best ears are often hung on a pole on the veranda. Good field ears may also be hung in
● [252] the house. Most black corn is consumed as roasting ears. Otherwise it is usually saved
[796] to make tamales in Easter week.

Discussion of land values, maize yields, and labor costs is deferred to the section on economics.

WHEAT

243 Wheat lands may be fertilized by hiring
[231] sheep to bed at night on wheat fields. Lands are plowed once before planting, and the seed is then sown broadcast. The land is then plowed lightly a second time, the furrows being at right angles to the first. Thorny brush, such as wild crab apple, is weighted and dragged across the furrows to break up large clods and to complete covering of the seed.

Some persons say only one kind of wheat is grown at Cherán, a type planted between September and November and maturing during the dry season. However, both bearded and beardless varieties were observed. Moreover, a few families have a so-called winter wheat
[821] ("winter" in Cherán is the rainy season, technically our summer) which is planted before the rainy season and matures in August or September. The more commonly grown wheat, it is said, would not survive so much water. Some other Tarascan towns near Tangancicuaro are reported to grow a reddish-colored wheat.

The dry-season wheat is short-stalked and often grows very sparsely. Moreover, most wheat is grown on inferior sloping lands or lands on which corn does not do well. Rains often appear to be inadequate to produce a

243 good crop, although complete failure is rare. A little wheat is grown in town lots, where it seems to do better than in fields.

[462] Wheat is harvested by hand with a sickle. Men do most of the work, but women and children help sometimes. The plants are cut as close to the ground as possible, tied in sheaves, and transported to the houses. One, and in [407] 1940 two, small threshing machine is used in Cherán, but the bulk of the wheat is threshed by hand with flails. The flail used is a slender pole about 8 feet long. To this are fastened two or three heavy iron wires some 10 to 12 feet long. Threshing is done on any hard clean-swept ground when the weather is dry. One stone threshing floor exists at the end of Zaragoza Street. The owner is usually given a liter or so of wheat for its use, although it is built on public property. The straw is carefully saved, whether threshing is done by hand or by machine. Both men and women winnow [462] the wheat on windy days (pl. 3, center). The grain is stored in sacks.

252 Some wheat is consumed locally. It is ground on the metate and made into bread or 439 atole. The bulk of the wheat is sold, however, to four mills at Purépero, Carapan, Tarataro, Jacona, or as far away as Morelia (since the highway has been built). Wheat is, indeed, probably the major cash export crop of Cherán. Prices and costs are discussed later.

MINOR CROPS

Barley.—Some barley is sown in June and harvested about October. Techniques of planting and harvesting are similar to those for wheat. Barley is fed to animals or sold outside the town. It is stored in sacks. Most barley is planted to restore failing cornlands, and the quantity is not important nor is it regarded as an intrinsically valuable crop.

Oats.—Although the growing of oats is reported, no farmer was found who had planted the grain. The quantity must be unimportant.

Beans.—The soil of Cherán is said not to be 244 good for beans; possibly the climate is also unsatisfactory. Whatever the reason, Cherán grows few beans and many are imported from the Lake Pátzcuaro region.

The principal bean grown is a small pinkish type called *criolla*. White, orange-yellow,

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
Sierra Tarascans

244 brownish, and various spotted beans with much variation in size and shape were observed, and, in many cases, were named by informants. Until reports are received from botanists, the details of variation seem of little interest. All seem to be of climbing types.

Some people plant a few beans between the corn rows, usually in the garden. Mixing of corn and bean seed is said not to give good results. Separate planting of beans is rare, if it occurs at all. Beans are threshed by driving burros over the straw, or children may trample out small quantities.

Squashes and pumpkins.—A few pumpkins are grown in gardens for home use. The most common type is a squash known as chilacayote, although it is not grown abundantly.

The chilacayote must be planted 15 to 20 feet apart, for the plant spreads widely. Uusally it is planted in gardens. The fruit is large and green, resembling a watermelon in shape and color. The flesh is white and watery.

251 Some chilacayote is eaten fresh, cooked with
[252] brown sugar. Usually, though, it is cured by leaving it in the sun on roofs or wall tops for 2 or 3 weeks. Sometimes the squashes are coated with ashes mixed with water. This is believed to harden the exterior. After curing, they are stored in the "*troje*" or in the storage loft and saved until spring. Planting time is the traditional season for eating chilacayote, for this is a period when there are almost no fresh fruits or vegetables. The squashes sell [435] for 25 to 50 centavos.

Broadbeans or habas.—Broadbeans (*Vicia*
244 *faba*), a coarse variety of European vetch, are usually planted in gardens or, more rarely, in the field. They are planted in furrows, like maize, and are cultivated similarly. Broadbeans yield well in Cherán but relatively few are grown, as they are not liked as well as ordinary beans.

Potatoes.—Planting of potatoes began in Cherán only 2 or 3 years ago. Apparently [439] they do well but only a few are planted as yet, principally for sale in Mexican communities, for they have little place in Tarascan cookery. They are planted in April and harvested in November or December.

Chayote.—The chayote is not grown abundantly. Plants are found only in gardens,

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244 usually near the house, where they spread over kitchen roofs, sheds, and fences. Planting is in the week of Candelaria. No fruit is borne until the second year.

The tubers formed on the roots of the chayote plant, called chinchayote, are dug up every third year on New Year's day or shortly after. They are found about a yard and a half from the stalk at a depth of 2 feet. They are boiled
[252] or fried and eaten. In flavor and texture they are superior to potatoes, which they resemble. If the tubers are not removed every 3 years, they rot and the plant sickens and does not bear.[9]

Miscellaneous vegetables and herbs.—Green vegetables and herbs are usually grown in small garden plots within the patio or houseyard. Most important is cabbage, of which two varieties are grown, one which heads and one which does not. The latter is the more common, producing a cluster of large leaves along a stalk a foot or more in height. Cabbage is an essential ingredient of the universal meat dish, čurípo.

On rare occasions, other vegetables are grown, such as carrots, tomatoes, and onions. The latter two do not produce well in Cherán,
[262] and carrots and other vegetables have little place in Tarascan cookery.

[263] Almost every garden has a few herbs, the most common of which is *silantro* (kulántro), used to flavor meat dishes. Two mints (kuaǵitiniš and kuaǵitiniš kamáta akúa) are grown for use in atoles.

[278] Camomiles, *manzanillo*, of at least two types are grown as carminatives.

Agave.—Although agaves (akámba) are
249 planted extensively along the ditches cut as field boundaries to keep out animals, relatively little use is made of them. There is some
[272] collection of the juice, *agua miel* (urápi). Some is consumed locally, but most of it is shipped to Uruapan. No native residents drink
[273] the juice after fermentation as *pulque*. Only wild agaves are roasted.

To secure the juice, according to description, a cavity is cut in the heart with a knife and the

[9] In Paricutin village, chayotes (apúpo) are planted in stone-lined pits to protect the seeds from gophers. The pit is about 30 cm. deep. The pulp is carefully removed from the seeds, which are then carefully wrapped in maize husks and tied with the same material.

249 pulp is chopped. Three days later the chopped material is removed and the surface of the cavity is scratched with a rakelike implement. On the fourth day, collection of the juice begins twice daily. Each time juice is collected, the surface of the cavity is scratched with the rakelike implement. The juice is dipped out with a small pottery vessel and poured into a larger container. If the juice is to be shipped to Uruapan it is put in a 25-liter can. A good plant produces slightly more than 2 liters a day.

252 The bud of the wild agave is cooked in a round hole, 1 meter in diameter and 1 meter deep. The hole is filled with small stones to within 10 or 15 cm. of the top, and a large fire is built on top of the stones. When the fire dies down, the agave buds are thrown on it, covered with leaves of agaves and trees, and then sealed with earth. On the third day the oven is opened. The thick fleshy end of leaves of the smaller wild agave are also roasted. The season is from November to May.

Approximately 20 men in Cherán roast agave in season. They must eat sugar when the agave is cooking so that it will emerge sweet. [834] They must also abstain from sexual intercourse during the 3 days the agave is in the oven.[10]

245 *Pears.*—The most important fruit in Cherán is the pear. It is carried by traders as far as [439] Guerrero. Three types are recognized: *leche* (uérgamóte), *pardo* (ɛarápiti), and t'aɛani (Spanish name unknown). The only significant difference recognized is that the three types mature at different times, although some say only the uérgamóte transports well.

245 Pear trees are always grafted on a rootstock of wild crab apple, *tejocote*. (This is a sloe-242 like fruit which bears a marked resemblance in flavor and appearance to the true crab apple.) The *tejocote* trunk is cut with a saw and then split. A pear graft is inserted at each end of the split, sealed in with wax, and wrapped in clean cloth. It is believed the grafts will grow only in January, February, and March, but a school teacher with experimental tendencies claims to have grown them at all seasons.

[194] [10] Agave is of varying importance in other towns. In Angáhuan the techniques are similar. The plant is known here as quiote; the leaves are called ɨíkua, the stalk or bud, ɨámaɨ. Mastiolsed Chilchota makes mescal. The leaves are cooked in earth ovens, macerated with clubs in cement tanks, fermented several days, then distilled. The Tarascan terminology relating to the agave and its processing survives in part.

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
[p.286] Sierra Tarascans

245 *tejocote* as a domesticated type. It is harvested and exported for making jellies and
[252] preserves. A few are used locally.
[439] Some quince trees are found in Cherán. They are little used, but some preserves are made.

BELIEFS AND CUSTOMS

241 Most beliefs and customs center about maize. Most important are the beliefs about red ears, čóču. A red ear is described as the mother, chief, and ače (ceremonial leader) of all maize. In the storage lofts, red ears are mixed in with the yellow and white to act as guardian of the rest. They are never eaten until all the white and the yellow corn are gone. Care is taken to plant seed from one or more red ears in each field; otherwise it is believed that there will be no harvest.

[755] Red ears and black ears are both said to be used in curing, but no details could be secured.

Twin ears, *cuates* (šaninkuáte), are said to come because God wishes to send a little more. Sometimes large ears have four or five points; they are said to be the hand of the planter.

[782] The family harvesting the first green corn in the town places two or three ears on the altar of San Francisco. Each family gives one or two *cargas* of maize on the cob to the priest.

789 If the rains do not come at the proper time near the end of May, the image of San Ramos
[778] is taken to the peak of San Marcos. The image is placed on a white sheet, held by a man at each corner, and tossed in the sheet. If San Ramos can be made to cry, it begins to rain immediately. During the rite a *rezador* recites a rosary, copal is burned, and *cohetes* are fired.

241 Every year, beginning in January, the grass is burned, causing great damage to the forests and destroying the last remnants of pasture. The burning is said to prevent heavy frosts, while the smoke hastens the coming of the
[632] rains. Town officials and officers of the Forest Service succeeded in extinguishing most of the fires in 1940.

It is said there are no beliefs regarding wheat. Nevertheless, wheat must be carried in a wooden bowl while sowing or it will be attacked by rust, "*tecolote.*" Rust is a sign the planter used his hat, blanket, or some other improper article at planting. Girls plait elab-

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
[p.309] Sierra Tarascans

231 animal to a herd containing bulls. Sometimes
232 he will seek a bull regarded as superior. There is no service fee. Cattle are branded when
[422] young and draft animals almost always are castrated.

231 *Pigs.*—Probably the pig is the second most important animal in Cherán; certainly it is the most common. Almost every family has at least one sow. If a family has no sow of its own, usually someone will lend a sow to be fed. In this case the litter is divided; should the animal lent be a male, the meat or proceeds of sale are shared.

[438] The pig is raised for meat and fat or for sale, often outside the village. The skin has very little value. No use is made of the hoofs, but
[252] the entrails are prized as sausage casings. A
[364] not unimportant function of pigs is their service as scavengers.

[232] Although some persons in Cherán were said to keep boars for breeding purposes and to charge a small fee for service (of from 25 centavos to 1 peso in Paricutin), evidently little care is taken in breeding. Most males are uncastrated until it is desired to fatten them. As the pigs roam the streets and nearby roads and woods during the day, little selective breeding seems possible. Normally, pigs are fed just enough corn to keep them returning home. At night they are placed in pens to protect them from coyotes.

Ordinarily only boars are fattened and slaughtered. Some people castrate their animals before fattening them, claiming they will fatten on less grain. Others dispute this, saying further that meat from castrated hogs has no flavor. Not every one knows how to castrate, but field notes do not indicate whether a charge is made for the operation when the aid of a neighbor is necessary. Animals being fattened are shut in small log pens with wooden floors, which are cleaned at frequent intervals. It is claimed that there are two types of pig, one of which fattens more readily than the other. At least 1 *fanega* (about 90.8 qts.) of maize is used in fattening a pig. Fattened pigs are normally sold to butchers; owners ordinarily kill their own pigs only for fiestas.

233 *Sheep.*—Although relatively few families own sheep, the number owned in Cherán is

233 fairly large and they assist materially in fertilizing wheatfields. Wheat farmers will pay about 30 centavos a night to have an average herd bedded on their fields. This is not done for cornlands, as the return is not considered sufficient.

No sheep owner gets his living from the ownership of sheep, but in some cases individuals or even entire families live on their wages as sheepherders. Most sheepherders, however, are boys of from 8 to 20 years and old men and women. Very poor families may start their sons to learn sheep herding as apprentices as early as 6 years of age.

Ordinarily sheepherders return to town only for fiestas or when they need new clothes. Their food is taken to them by a woman in the family. If the entire family work as shepherds, the wife returns to town periodically to [252] cook a supply of tortillas or *gordas* (thick tortilla fried in fat, sometimes made of wheat flour instead of maize).

233 The average wages of sheepherders are 5
465 pesos a month without food, but this evidently varies with the size of the flock. One of the larger owners, with a flock of about 200 sheep, pays 10 centavos a head a month, 1 *fanega* of maize, and permits slaughter of 1 sheep a month. In all cases, shepherds may eat sheep which die, if they think it safe to do so, but the pelt must be washed and dried, and given to the owner.

233 Shepherds watch one another to prevent mis-
[626] behavior, such as secretly selling sheep, or carelessness which would reflect on the profession. Shepherds care for the flocks, protect them from coyotes, and put the ownership marks on the lambs. They are aided by specially trained dogs.

Sheep are herded in the mountains part of the year, and on farm lands after the harvest. [422] Identification marks are made by notching or cutting the ears. Males are not castrated. During the dry season, numerous sheep die of starvation unless their owners have feed (usually wheat straw). Sheep are not dipped and in general receive little care beyond herding. Coyotes are the principal enemies, although a waggish informant listed the enemies of sheep [522] as "First, the coyote; second, the shepherd; and third, the man who buys him for food."

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
Sierra Tarascans

[p.486]

184
262 eat cooked chayotes, chilacayotes, or boiled
264 squash (sometimes with brown sugar).

The following are the foods most commonly
262 eaten in Cherán:

All seasons: Tortillas, čurípo, tamales (kurúndas type), beans, beef or pork in brown mole, fish, cabbage, chiles, onions, coffee, chocolate, lemons, bananas, peanuts.

January: Cherimoyas, *zapote negro*, oranges.

February: Oranges.

March: Chilacayote (a squash stored since October).

April: Cherries, avocados, oranges.

May: Mushrooms, *nopales* (young leaves of the prickly pear), wheat breads, wheat, tortillas, avocados, watermelons.

June: Mushrooms, pears, peaches, avocados, cheese, sugarcane.

July: Cheese, immature squash, squash blossoms, pears, peaches, sugarcane.

August: Pears, peaches, green corn, sweet tamales (očepos), apples, cheese, sweetpotatoes, sugarcane, broadbeans (*habas*).

September: Pears, apples, crab apples (*tejocote*), cheese, sweetpotatoes, sugarcane, broadbeans, honey.

October: Chayotes, chilacayotes, crab apples, honey, sugarcane, guavas, oranges, papayas, broadbeans, cheese.

November: Chayotes, chilacayotes, broadbeans, guavas, oranges, pumpkins, cheese.

December: Cherimoyas, chayotes, some chilacayotes, guavas, oranges.

Some of these foods may be available in other months, but the periods in the list represent the times of greatest use. The list does not contain a number of little-used foods. Except for a few herbs, the maguey, and wild crab apple, no wild vegetable foods are eaten in Cherán.[13]

MEAT FOODS

252 Čurípo is a stewed meat, almost always of
262 beef, usually containing cabbage, a few gara-
banzos (chickpeas), and often a bit of carrot.
[263] Salt and a considerable quantity of ground dried chile are employed as seasoning. The thin broth is served in the same dish. One or two pieces of meat weighing about 2 ounces, a little of the vegetables, and about a cup of broth comprise the usual serving. Second servings are not usually eaten either by guests or in the privacy of the home. This food is eaten on all fiesta occasions throughout the year

[13] Some wild foods are reported by Sra. Rendón for La Cañada. Bitter prickly pear, tuna agria (*joconoscostle*), is used as greens in čurípo and in making chile sauce (sindurakua). La Cañada Tarascans say mulberry leaves (?), *hojas de mora*, are eaten by the Sierra Tarascans "because of their poverty."

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
[p.49a]

and as a daily food by all who can afford it, which in Cherán would probably constitute a considerable majority of the population. It is often eaten with tamales of the type known as kurúndas, or with boiled chayote. Meat, if not made into čurípo, usually is boiled.[14]

Mole is a less common meat dish, probably derived from the Mestizos. It consists of a stew, preferably of turkey, but if this is not obtainable, of chicken, pork, or beef in descending order of frequency as well as preference. Pieces of the boiled meat are served in a sauce made in various ways, according to the availability of the ingredients and the knowledge of the cook. The sauce may include the following ingredients: Cloves, ginger, chocolate, cinnamon, ground toasted bread or tortillas, pumpkin seeds, garlic, onion, and chile of the type known as pasíya or *"chileancho."* The chiles are either fried in lard or dipped in hot water, ground with the other ingredients, and cooked in the meat broth. A thick, rich, and usually rather greasy sauce or gravy is the result. Mole is usually eaten on special occasions.

Fish are brought to Cherán either fresh, broiled, or dried. Fresh fish come from Erongaricuaro on Lake Pátzcuaro only a limited part of the year, usually just after the rainy season in the fall. It is expensive compared with meat, but is much liked. During the rainy season, broiled fish are brought from Lake Chapala; in the dry season, from Erongaricuaro.

The fish are washed carefully in hot water before cooking. Fish is boiled in water with onion and *silantro* (a pungent herb). Some people eat the intestines, removing only the bile. Seasoning with chile and tomato, ground together, is common; sometimes the broth is thickened with maize dough and sometimes onion is added. Fish may also be fried with eggs in lard, making a sort of fish hash.

Small dry fish (čaráles), resembling small dried minnows, are on sale on market day throughout the year and also at many of the stores. They are toasted on the *comal* and eaten with chile and tortillas, especially for breakfast. They are also made into a broth with chile sauce.

[14] The majority of the recipes were collected by Silvia Rendón.

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
[p.496] Sierra Tarascans

262 It is believed to be injurious to eat any kind
252 of fish when ill of the "*bilis*."

Game is eaten to some extent when available. Deer meat is sold in pieces or in retail quantities by the hunters in much the same fashion as beef. Squirrels, doves, and ducks are all liked. Squirrels are sold at 10 centavos, doves at 5 centavos, and ducks at 50 centavos to 1 peso. Ducks come from Zacapu. A few people eat pigeons. Only adult pigeons are eaten.[15]

Eggs are eaten to a considerable extent, fried, mixed with fish, or scrambled with cheese. But poor families, even if they have chickens, prefer to sell the eggs and buy beans.

MAIZE FOODS

Maize is made into tortillas, *gordos*, posole, or tamales, and is also used to thicken some types of broths and sauces. It is also eaten green, and certain foods are made from green corn. No maize foods are salted. Maize types include white, yellow, red, and black, the latter two types not being common. White maize is sold chiefly outside the village.

Methods of initial preparation vary. For tortillas and *gordos* the maize is boiled with lime. This softens and to some extent dissolves the outer shell of the grain. After thorough washing in a special basket, it is ground into *nixtamal* or dough. If economically possi-
[556] ble, grinding is done at the power mills in the town, followed by further grinding at home. Some people are too poor to pay for the mill, and the women do all the grinding on the metate.

Tortillas are made of the *nixtamal* or maize dough. A quantity is scooped off the metate and shaped into a flat disk in the hands. This is then skillfully slapped between the palms until it becomes a thin sheet about one-eighth inch in thickness and 6 or 7 inches in diameter. This sheet is baked on a dry flat clay dish, the *comal*, with moderate heat. Usually the tortilla is turned two or three times in the process. Tortillas are served at virtually every meal, regardless of the rest of the menu, and are the main article of diet.

Gordos are smaller and thicker cakes fried

[15] The people of Ichán in La Cañada are well known for their fondness for small wild birds such as *zompotes*, doves (*huilotas*), wild pigeons, *torcazas*, and *jarrines*.

262 in deep pork fat. Wheat is used for *gordos*
252 more often than is maize.

Nixtamal prepared for tortillas or *gordos* is the kind used to thicken sauces or soups.

For posole the maize is cooked with oak wood ashes instead of with lime. When cooked, it is white instead of yellow, as it is when lime is used. The shell is completely removed in this process. The grain is then washed thoroughly and boiled with pork, chile, and chopped onion. Posole is essentially a fiesta dish, served especially with certain birthday celebrations.

Tamales are made from maize prepared as for posole but ground either at the power mill or on the metate. There are several kinds of tamales.

Kurúnda is the most frequently made type of tamale. The maize is prepared apart from that intended for tortillas. The dough is mixed
[751] with bicarbonate of soda, which is said to prevent the tamale from constipating the eater. The *nixtamal* is then spread on the metate with the aid of the mano or grinding stone and the cook takes a quantity in the palm of the hand, molding it into a flattened ball. It is then tightly wound with several thicknesses of maize leaves (not husks) in such a fashion that the finished kurúnda is triangular in shape. The tamale is then boiled for some time in a covered vessel. The dough is thick, compact, and heavy, retaining something of the taste of the bicarbonate of soda. Usually kurúndas are the size of the palm of the hand, but for a person who is "very refined" (*muy fino*), they
[576] may be made smaller, a delicate way of paying a compliment.

The kurúnda is an essential part of a great many special meals, such as those served at weddings, for entertainment of guests, and at fiestas. It is usually eaten with čurípo but may sometimes be eaten with atole. On such occasions, when kurúndas are served to men the wrappings are always removed but to women they are always served with the wrappings, possibly because the women frequently take them home. Kurúndas may also be eaten cold the next day, but usually they are heated on the
[265] *comal*. They are sometimes sold on the streets
[435] at 4 to 5 centavos and are always available on market days. The vendors are always women.

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
[p.505] Sierra Tarascans

262 With čurípo, the kurúnda is one of the most
252 typical of Tarascan dishes.[16]

There are various forms of the kurúnda, which are eaten on special occasions. The details follow.

Atápakwa kurúnda.—Atápakwa is a sauce made of any kind of chile, cooked, toasted, or raw. This is ground with green tomatoes, garlic, and onion, and seasoned with salt. Fresh or dried cheese, finely broken up, may be added. The regular kurúnda is simply dipped in the sauce as it is eaten. This dish may be served at any time, but it is most frequently used when men come home to lunch from the fields or on other occasions in the middle of the day when the family do not ordinarily have a midday meal.

Agwákata kurúnda.—Beans of any sort are cooked and ground. They are placed in layers alternating with layers of *nixtamal* until a thick cake is formed. This is wrapped in maize leaves and steamed. Agwákata kurúndas are made primarily at the time of the bean harvest (Cherán grows few beans) and are eaten at any of the main meals. They may also be given to children between meals.

Nákatamal.—This is a tamale made with maize dough filled with meat and chile sauce. Beef is commonly used, although pork may also be employed. The meat is boiled in water and cut in small pieces without bones. It is then mixed with a chile sauce made of the dry chile known as *pasiya*, which is cooked in water and ground with tomatoes, garlic, and onions. These tamales are not wrapped in maize leaves but in dry maize husks soaked in water. A small quantity of dough is spread over the leaf and on this is placed a small quantity of meat and sauce. The leaf is then doubled over and the tamale cooked in boiling water. The nákatamal must be small in size to be properly made. The name and the type suggest it is of
[177] Valley of Mexico origin. It is ordinarily made
769 only for the fiestas of the dead on the 1st and
252 2d of November, although it was served to me
262 once on an ordinary occasion. It forms a part of the offerings made to the dead and is also eaten in the graveyard by the mourners and

[16] In Parícutin kurúnda means "corn husks." Kurunduráni means "to wrap tamales in maize leaves."

[769] guests. A few are made for sale on the 1st 262 and 2d of November.

● 252 *Tamalito.*—This is made by mixing dough with lard and salt, forming a small ball, which is wrapped in maize leaves and cooked in boiling water. It is usually eaten the following morning for breakfast, commonly with *atole blanco.*

Čarikurúnda.—This tamale is made of black maize, boiled with wood ashes, washed, and milled. The dough is allowed to stand one night, becoming somewhat bitter. Beans are cooked and ground on the metate. A layer of bean paste is laid over a layer of maize dough, covering the metate. This is cut in squares, about three fingers wide, which are then rolled up, wrapped in maize leaves, and cooked in boiling water. The čarikurúnda is about the size of the kurúnda. It is made about March, at the period in which the sowing of maize begins. The colored maize is usually set apart out of each harvest for this purpose. A little white maize is often added "to improve the taste."

Atoles (*kamáta*) of various kinds are made. 272 The maize dough, prepared as for tortillas, is dissolved in water and cooked with various flavorings. The broth is sometimes fairly thick but ordinarily is drunk from a glass, bowl, or cup. There are also atoles made of other grains. Many are made at special seasons of the year or for special occasions. Atoles are usually eaten for the morning meal.

Nuríte kamáta.—This is the most common 252 form of atole. It is made as is described above 262 but is flavored with an herb called nuríte. It is 263 usually eaten for breakfast not less than once a week. Nuríte is a wild herb greatly used for flavoring and also for medicinal purposes. It imparts a slightly bitter flavor to atole, somewhat like *yerba buena.* No sugar, salt, or other flavoring is employed. This atole is commonly eaten with tortillas and a little cheese, or squash, or *gordos* of either dry or green maize.

Kamáta urápiti.—This is said to mean "white 252 atole." It is made of dough from either white 272 or yellow maize cooked in water with a little 273 thickening substance (not identified) and either without any seasoning whatever or with laurel (nurúkata). A small bite is taken from a cake of brown sugar, followed by a draft of atole, and then a drink of *aguardiente.* The atole

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
[P. 51b]

252 is drunk throughout the day, even by children
272 (including the *aguardiente*). It is made in
[273] March, April, and May.

Kágwas kamáta.—Fresh or dried nuríte is ground on the metate with three or four chiles of the type known as *cascabel* (káwas guajílyo). This is mixed with maize dough before it is dissolved in water and cooked. A little brown sugar and salt are added during the cooking. This atole is eaten in September with green corn on the cob. It is also eaten in December and January for either breakfast or supper; if the day is very cold, it may be taken during the day, for it is very "heating." For this reason it is also given to mothers for several days after parturition.

Turípiti kamáta.—This is made with maize dough and brown sugar. A quantity of corn husks is toasted until almost black; this is ground and added to the atole while cooking. The resulting atole is almost black and appears to have ashes in it. The taste is agreeable, however. Turípiti is usually eaten with nákatamales, but it is also eaten at any other time of the year, being one of the more popular atoles in Cherán. It is also sold daily at the *puestos* in Uruapan, where it is known as *atole de cascara de cacao*, "atole of chocolate bean husks," although it has not the slightest chocolate in it.

Kamáta urápiri.—This is said to mean atole of maguey (or agave). The unfermented juice of the maguey is used instead of water. The juice is cooked until foam ceases to form on top and it is a little thick. Instead of maize dough, white maize is toasted and ground into flour, then added to the juice. It is made in the period before the rainy season, April, May June.

Srímba kamáta or téri kamáta (*šrimba, "cane," or teri, "sweet"*).—The sweet juice of mature green cornstalks is extracted by grinding the stalks on the metate. The juice is boiled until it no longer forms foam on top, and is a little thick. Green corn is cut from the cob, milled, and added to the liquid and cooked with water added. This atole is eaten only in the period green corn is available.

Iusítini kamáta.—This is a variant of nuríte kamáta, to which salt and three or four red

252 chiles are added. Everything is passed through
272 a colander before cooking.

Puɬiti kamáta.—This is made as is the one just described, but anis is used as flavoring and ground green corn is used instead of the ordinary maize dough. Nothing else is eaten with this.

Tamaríndo kamáta.—Maize dough and sugar are put through a colander and thoroughly boiled with 5 centavos worth of tamarind or blackberries. A small quantity of leaves of black or red maize is boiled; the liquid is added, giving the atole a blackish color. It is eaten with bread in the dry season.

Čarákata čarápiti.—According to another informant, this is made the same as tamaríndo kamáta, but with ground tamarisk or ground blackberry added. It is said this is the only occasion blackberries are used. March, April, and May, the warm season, is the time for eating this, as it is said to be a "cold" atole. When the atole has cooled and thickened, small portions are sometimes put on the colored maize leaves and allowed to thicken or harden like fruit paste. If not eaten immediately, it may be wrapped in the leaves.

Iɬúkua kámata (milk atole).—Ordinary maize dough atole is made with milk. This is one of the more common atoles. It is eaten with bread.[17]

252 *Tóquera ičusta.*—Uncooked maize tóquera
262 (half way between green and mature maize)
is ground on the metate, mixed with brown
[751] sugar and bicarbonate of soda (to prevent constipation), and fried in fat. This is a type of *gordo.*

Uačakata.—This is red or black maize which
251 has been boiled on the cob and then dried for at
252 least several months. This is one of the forms of maize preservation; the maize may be kept as long as 2 years. When desired, it is soaked for a day and night and then boiled. It is used ground for atole or is boiled with brown sugar.

RICE FOODS

252 *Arroz kamáta, rice atole.*—Well-cooked rice,
262 milk, sugar, a bit of cinnamon, and a little

[17] It is reported that in Zamora and Pueropero, both old Mestizo towns, the favorite atole is made of mesquite. The beans are ground on the metate and cooked.

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34

252 wheat flour or maize dough for thickening are
262 all passed through a colander and boiled.

AMARANTH FOODS

Čápata kurúnda.—This is a tamale made from amaranth, *bledos* or *alegría* (paári), which is cultivated both in gardens and in the fields. The seed is ground with brown sugar, with water added to make a dough. It is then wrapped in maize husks and cooked.

WHEAT FOODS

At harvest time the heads are toasted on the *comal* and eaten. A kind of oval wheat flour tortilla is made just after wheat harvest, especially in May and June.

Semítas, or round wheat breads.—These [438] are made primarily in the town, partly for sale [443] in Uruapan or Paracho on market days. The wheat is usually ground on the metate, but there is some variation in the coarseness of the flour. Semítas are made with yeast, shaped, and set on boards to rise. They are baked in the dome-shaped Spanish oven. If the baker does not [427] own an oven, she pays one bread for each board-ful she bakes.

Tri kamáta.—Wheat is dampened and ground to flour, with water added to make a dough. The dough is dissolved in water and cooked with an herb called epazóte (*chile cascabel*) and salt. It is strained before boiling. It is eaten alone without bread or tortillas.

Gordos.—Ground wheat is mixed with water and made into flat cakes. They are fried in deep pork fat, and are pretty greasy.

VEGETABLES AND FRUITS

Cabbage is the most common vegetable. It is always eaten cooked, usually with meat. Scarcely a house in Cherán does not have a small plot of cabbage. People who do not have their own, buy cabbage from house own-[443] ers who do. Cabbage is not sold in the market.

Chayotes constitute an important food during the season. Children munch on them all day. Cooked chayotes are sold on the streets at [435] 2 to 5 centavos, depending on size.

Chayote roots, which are dug up every few years, are boiled and eaten. They resemble a very good baked potato in flavor.

252 Peanuts are often on sale on the streets.
262 They and cooked squash are the only refreshments accessible to the very poor. Generally
[435] about a handful may be purchased for 1 centavo.

Chilacayote is a member of the squash family with watery white flesh. It probably is closest to what we call pie melons in the United States. It is much liked. The young, immature fruits are boiled with a little milk and, if it can be afforded, a little cheese.

As mentioned previously, mature chilacayotes are eaten all year but mainly in the spring.
[251] If placed in the sun daily for some time during dry weather, they will keep for some months in storage. They are sometimes coated with ashes mixed in water before storage. To serve, they are cut in pieces and boiled. Usually,
[435] cooked pieces may be bought on the street for a centavo.

Atapákua is made of squash blossoms and sliced immature squash, cooked with chile and a little flour or maize dough for thickening.

Nopal (prickly pear) is used as a vegetable. The tender leaves are skinned, cut in small squares, boiled, and then usually fried very lightly in lard.

Squash greens (the tender tips of the runners on the vines), which are commonly eaten in many parts of Mexico, are rarely eaten in Cherán. An informant had "heard" that those people who did eat them boiled the greens, then cooked them lightly with lard.

Green beans are not eaten. Informants did not even know a name for them. Dried beans are boiled, usually with a very little salt. They are often not very well done because of the altitude. They are watery and tasteless to an outsider, although relished by the residents.
[34] They are scarce, as there are few suitable soils near Cherán and most beans are imported from the Lake Pátzcuaro region.

262 Fruits are eaten rather sparingly in season in accordance with the economic status of the family. Locally grown fruits are eaten rather more than imported fruits. Children and young people appear to eat rather more fruit than do adults. Nearly every Cherán lot will have at least a pear, peach, apple, or cherry tree. Tunas, the fruit of the prickly pear, are also eaten as fruit.

[p.157a]

194 Maize stalks, chewed as a sweet to a greater
262 extent than in Cherán.

Salt-rising bread made by one baker once a week. It sells at 10 centavos a piece.

The daily adult consumption of corn was estimated at three-eighths of a liter.

In Angáhuan, a large, isolated, and conservative western sierra town, two meals daily are
[264] also the rule. The usual hours are 10 a. m. and 6 p. m. Children and sick people may also eat tortillas or cold kurúndas at other hours. Tortillas are made by only a few women, the kurúnda taking its place. The kurúnda here is not wrapped in the maize leaf (k'an) but in the husk of the ear (šarákata).

The beef broth (čurípo) is made for preference from slightly spoiled meat or dried meat. (This is also true at Paricutin.) As there are no butchers in Angáhuan, butchering is done at home. Some of the meat is sold; the rest is
[251] cut in strips, rubbed with salt, and dried on the house roofs.

The agwákata tamale is made with beans like that of Cherán. It is eaten only for the
[196] fiestas of Candelaria (February 2), Carnival, Santa Cruz (May 3), Corpus, and at weddings.

Máškuta is a *posole* made of boiled black
[252] maize (čiráns), boiled beans, silantro, and chile. A little dough of ground black corn is added as thickening. This is served to guests at New Year's and at the fiestas in December and July. At New Year's the *posole* is accompanied by huge kurúndas weighing about 2 kilos.

272 Little milk is consumed. However, the town
184 produces enough cheese for export.

Agua miel is consumed in season. Pulque is little liked. A common drink is *"tepache"*
[273] (čarápe), which is slightly alcoholic.[30] It is made of barley, boiled in water and left in the water for a week. Carbonate and sweetening are then added.

Papaya juice is drunk and the seeds are toasted and eaten.

262 Men working in the fields or woods often
184 carry maize on the cob which they shell and
252 toast by a fire. This is called *"esquite"* (guaníto). They also carry *"esquite"* from home already prepared and mixed with brown sugar.

[30] In Oaxaca, "tepache" is pulque reinforced with brown sugar and is more than "slightly" alcoholic.

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34

527 organized fights or any considerable amount of
54 betting. During 8 months I neither saw nor heard of cock fighting except in connection with the fiesta.

CARNIVAL

527 The Tuesday before the beginning of Lent,
[785] everyone fasts until noon. After breaking the fast, the young men go about the streets, some with musicians and some without. The girls sit at the doors of their houses with baskets of elaborately painted eggshells filled with confetti which they have been saving for several months. The boys buy the eggs from the girls and then break them over the girls' heads. The boys and girls also throw confetti at one another and sometimes the boys get such things as oranges and throw them at one another. This is repeated on Wednesday and is the only celebration of carnival.

LENT AND HOLY WEEK

796 Most of the population fast part of Lent.
[785] Some people fast until noon every day. Others do this only two or three times. On Fridays most people abstain from meat but otherwise do not fast especially.

[624] Before Palm Sunday, the collector (an official of the *cabildo*) visits the fathers of boys of suitable age and selects a boy from each *barrio*. When the boy and his father have accepted, the boy picks a girl to assist him, usually his sweetheart. The collector then visits the girl's father and gets his consent. The boys now
[484] make a trip to the hot country to bring back green palm leaves for use in the church on Palm Sunday. Before leaving, each boy gives the girl about half a hectoliter of maize, 5 liters of black maize, and some brown sugar. The
[252] girl toasts the regular maize well, grinds it, and makes large balls of the ground maize, or pinole, and the brown sugar. These are wrapped in leaves painted with many colors with analine dyes. The black maize she makes into *gorditos*, a sort of fried tortilla.

The boy also provides a wooden cross some 5 feet high. To this are fastened the balls of pinole along the upright and the arms of the cross. At the top of the cross and on the arms are also hung many fiber bags (*morales*) and small cloths used to wrap up tortillas. The

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34

Sierra Tarascans
La Cañada

443 Sunday. The places where meat is sold are
253 called *"despachos"* and are announced by hang-
262 ing out a red flag on a standard. Four or five places sell meat remaining from Sunday through most of the week. No distinction is made in price between meat with bone and meat without bone, but on request one will be served only meat; in the Tarascan towns the buyer has to take what is cut. Pork is preferred to beef. Beef hides are sold to dealers; those of swine either are made into cracklings or are pickled in vinegar after rubbing with chile, onion, garlic, and fragrant herbs.

226 Some fish are caught with nets in the river
262 passing Chilchota. The fishermen are only semiprofessional, fishing when they have time and selling the catch only if they have more than can be consumed at home. At least one
224 man, a farmer, hunts deer in his spare time.
262 He sells the flesh retail like beef. The dried
237 deer blood, hoofs, and hair are sold for magical or medicinal uses.

252 Black maize is used primarily to make
262 *chapatas*, tamales of black or red maize, sweetened with brown sugar and mixed with black or red amaranth. It is also used to make *atole de cascara de cacao* (atole of chocolate hulls) and *ponteduros*, which are toasted immature corn ground and mixed with brown sugar sirup.

423 Greens (*quelites*) of wheat are made from
252 a wild plant or weed which grows among the
262 wheat and are greatly liked in Chilchota. A curious custom exists in that anyone may help himself to these greens, entering into wheat fields belonging to others either with or without permission. Anyone objecting would be severely censored in Chilchota. Pozole is also made from green wheat toasted, ground, and mixed with chile, salt, and *"epazote."* The time for this is May at the harvest; it is "hot" food.

252 A food made from the chayote root is *sagú*.
262 The skin is removed from the tubers and the pulp ground to a sort of flour. The flour is placed in water for 2 or 3 days, being stirred frequently. The flour is then allowed to settle, the water drained off, and the flour dried. Although it is used in various dishes, the main
[846] use is to feed small children and women recently delivered, when it is cooked in water, either plain or sweetened with honey. The plain boiled chayote root, uarás in Tarascan, is sold

1:Beals E-5 (1940-1941) 1946 NU34 Tarasco NU34
[p.215a]

252 262 extensively in all La Cañada towns and is much liked.

One of the favorite meat dishes in Chilchota is not unlike the čurípo of the Tarascans and is called "*espinazo.*" It is a broth made from the backbone of the pig, flavored with chile and including cooked bitter prickly pears known as jococoxtles. The broth is usually accompanied by boiled rice.

237 252 262 Not much sausage is made in Chilchota, but the blood of the pig is greatly liked, both in Chilchota and the Tarascan towns of La
[text continues on top of p.215b]

APPENDIX 2

THE CEREMONIAL ORGANIZATION OF CHILCHOTA

121 [578] The following information on the ceremonial organization of Chilchota was collected by Pedro Carrasco. Due to political struggles, the ceremonial organization was not in existence from 1932 to 1940. The data given are representative of conditions as they existed before 1932, amplified by data on the partial revival of the ceremonial life of the town in 1940 (the differences are indicated by past and present tenses). The organization and the observances present many interesting parallels and differences from Cherán, particularly in view of the fact that Chilchota is a Mestizo town today. Carrasco found only one man of about 90 who had been reared in a Tarascan-speaking family; nevertheless, culturally Chilchota evidently is still somewhat of a Tarascan town. Many Tarascan words survive and such old institutions as the hospital are better preserved than in many Tarascan towns.

796 621 The ceremonial organization is linked with division of the town into *barrios* of San Juan and San Pedro. Two other *barrios* exist, Uren and Chapala, but they appear to be recent additions and, unless otherwise specified, only the first two *barrios* are referred to. The principal ceremonial offices and their relation to the *barrios* are as follows:

796 624

Office	*Barrio*
Mayordomo of the Hospital.....	One year from San Juan, the next from San Pedro

[text continues on middle of p.215b]

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
[p 215b] Sierra Tarascans
La Cañada

252 262 237 Cañada. The blood is placed in the cleaned entrails, together with other visceral parts of the animal, which have been cut into small pieces, *silantro*, chile, and onion. At some point the mixture is cooked. By the time the product is sold, the blood has solidfied. The purchasers remove the mixture from the casings, mill it on the metate with water, and fry it with lard.

Bread of the type known in Tarascan towns as *pan grueso* is made in Chilchota. Most bread, however, is brought from the larger neighboring town of Tangancícuaro.

APPENDIX 2

ORGANIZATION OF CHILCHOTA

Office	*Barrio*
Mayordomo of the patron saint, Santiago	One year from San Juan, the next from San Pedro
Carguero of San Roque or Karačakape	*Barrio* of San Juan
Carguero of San Nicolás	*Barrio* of San Pedro
Two *vaqueros*	One from each *barrio*
Four *roseras*[1] or nánančatis	Two from each *barrio*
Two *regidores*	One from each *barrio*

[1] One of the *roseras* is called *pondomperi*, and one *capitsmoro*. They are always of different *barrios*, the positions alternating from one *barrio* to the other each year.

796 624

All these individuals are called *cargueros*. It is they who bear the expense of all religious festivals.

[184] Unlike Cherán, this group of *cargueros* forms a hierarchy through which individuals pass, ultimately to become one of the *viejos principales* (principal old men) or tarépiti. The sequence is as given, the first position being that of *mayordomo* of the hospital, then *mayordomo* of Santiago, then either *carguero* of San Roque or of San Nicolás, depending on the *carguero's barrio*, then *vaquero* (while female members of his family serve as *roseras*), and finally *regidor*. After this the *carguero* is an "old man," a principal. The old men and the *cargueros* who have occupied the positions of both *mayordomo* of the hospital and *mayordomo* of Santiago form the group known as the *cabildo*.

In addition to the hierarchical offices, there are a number of minor positions, the most

242 November; land fallowed until following Novem-
243 ber.) Often fallow and planted fields are alternated between the slopes and the plains in the temporal lands.

Fertilization in field agriculture.—Tarascans make little or no attempt to apply fertilizer to maize fields. Occasionally animal manure (*estiércol*) from the stables in the house lots is spread over small parts of fields nearest the village.[*] Sheep and cattle, however, are turned into the fields after harvest, and shepherds are often paid to bed flocks in the fields. No commercial fertilizer is used, owing to its high cost. As mentioned above, new *desmontes* are fertilized by wood ash from freshly burned brush.

Uses of Maize—*Food.*—As in all indigenous
262 areas of Mexico, maize is the principal foodstuff
252 of the Tarascans. Six types of maize foods are common among modern Tarascans: (1) green corn, or roasting ears (*elote*, tiríapu); (2) toasted kernels ground to powder and mixed with sweetening (*pinole*, japúmata); (3) maize dough wrapped in maize leaves and boiled (*tamal*, k'uúnda); (4) maize gruel, or dough dissolved in water (*atole*, kamáta); (5) boiled maize kernels with shell removed (*pozole*, máskuta), similar to North American hominy; (6) thin cooked griddle cakes of maize dough (*tortilla*, ičúskuta), at present the most important single food item.

Elote foods.—Green corn is prepared by parching and by boiling. Without removing the inner husk, ears are often parched in the direct flames or under burning coals. Corn so prepared is called uiríkan in the Sierra. Ears roasted with husks removed are termed "uiríkata." Boiling with husks removed (jáman) is also common. Green ears are preserved by boiling and drying in the sun for many weeks. In the dried form they are called uačákata, and the consistency of fresh corn is revived by soaking and reboiling. Other types of maize foods are made from *elote:* a tamal (učépu) from early green maize; various atoles (atole de grano, atole de t'okéri, de uačákata, etc.); maize which is between the green and mature states (t'okéri) is often ground, shaped into small cakes, and boiled. The maize most frequently used for

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[*] In only one instance did the writer observe systematic application of manure. This was near the new Tarascan town of Caltzontzin, 6 km. east of Uruapan. In planting maize, the planter was followed by an individual who dropped a handful of manure over the seed. A plow followed, covering the seed and manure.

4: West K-5 (1946) 1948 NU34 Tarasco NU34
[P 40-a]

262
252 the above-named foods is the highly colored flour types grown in the house-lot gardens.

Pinole has the widest distribution and is possibly the most ancient of the maize foods in the New World. Among the Tarascans usually yellow maize from the *desmontes* is employed for pinole. The grain is toasted on the *comal*, then dry-ground on the metate, piloncillo being mixed in during the grinding process. *Pinole* is used almost exclusively for food on long trips. *Esquite* is prepared also by toasting whole grains of dried sweet or black *elote* corn on the *comal*, but it is not ground.

The preparation of tamales, pozole, atole, and tortillas among the Sierra Tarascans is discussed by Beals (1946, pp. 49–52). In preparing all four types, hard-shelled maize is first soaked and cooked in lime water to soften or remove the hard outer shell that covers each grain. (Beals mentions the use of oak ashes in soaking corn for pozole.) For tamales, atoles, and tortillas the soaked grains are wet-ground on the metate or in power-operated grinding mills (*molinos de nixtamal*). The fact that they form an essential part of fiesta and ritual foods of most Mexican Indians suggests that tamales and atoles may be more ancient than tortillas. The latter are commonplace in each of the two or three daily meals and carry no ritual significance. Moreover, the varieties of both tamales and atoles are numerous. Beals describes 10 atoles habitually made in Cherán; 11 kinds were noted in Sicuicho, only 5 of which were similar to those in Cherán. The varieties of atole are ordinarily distinguished by the addition of some flavoring, such as ground blackberries or herbs.

231 *Animal feed.*—Maize grain is commonly fed to livestock, notably for fattening hogs. Yellow corn, mainly Mountain Yellow, is considered the best for feed, as it has the highest oil content of all Tarascan corns; moreover, apparently the yellow color gene is associated with proper vitamin content for animal growth and fattening.[a]

439 *Sale of maize.*—The Tarascan Sierra is primarily a subsistence area in terms of maize, but when crops are good surplus grain is sold to buyers from Zamora, Tangancícuaro, Uruapan, and Zacapu. The surplus maize districts are

[a] According to Edgar Anderson (personal communication), in Jalisco the Yellow Mountain maize brought down from the highlands sells at a premium in the hog-raising districts south of Guadalajara.

4: West K-5 (1946) 1948 NU34 Tarasco NU34
[P. 41a]

244 special uses: e. g. because of its sweet flavor, it is eaten only with silacayote (*Cucurbita ficifolia*); in Ihuatzio it is ground with black maize to make pinole.

Lima beans (*P. lunatus*) may have been common formerly in Tarascan agriculture in the *tierra caliente*. In Acahuato, a former Tarascan pueblo (5 km. north of Apatzingán), a climbing brown-seeded lima called *comba* is still grown in the house-lot gardens. According to local informants, it was formerly an important bean in the Tepalcatepec Basin.[72] Moreover, the writer found a wild climbing lima in the hedge rows in the *tierra templada*, near Los Reyes.

Cultivation methods.—Except in some highly developed irrigation districts, most Mexican peasant farmers still use the ancient Indian method of planting beans with maize. In plowland Tarascans customarily alternate plantings of beans and corn along a given row (planted *intercalado*), whereas in hoe land beans and maize seeds are dropped in the same hole.[73] In either case the bean vine uses the maize stock as a climbing support, and imparts nitrogen to the soil. Beans are gathered in late fall or in early winter a few days before the maize harvest. When
[462] men are busy at other tasks, women and children gather the bean crop. Women sometimes plant beans with *elote* maize in the ekuáru; or often they plant beans alone, using poles for vine supports.

In many Tarascan pueblos bean production is declining; in some, farmers have ceased its cultivation. They claim that it is cheaper to buy *frijol* rather than to plant it, since the time and labor involved can be used more profitably at other tasks (e. g. lumbering). Others say that the soil lacks sufficient fertility to mature a bean crop. Again, in some sections of the Sierra beans are cultivated (with maize) only in newly cleared *desmontes*, where the ash from burned brush strengthens the soil sufficiently to raise one crop.

Use of frijol.—Beans are used exclusively for
[252] human food. They are boiled in *ollas* and served with salt. Tamales filled with beans are not uncommon. The special uses of kokó¢ have been mentioned above.

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[72] Hendrichs (1945-46, vol. 1, pp. 40, 238) reports a bean called "comba" from the Balsas Basin, but identifies it as *P. coccineus*. The "comba" from Acahuato was identified as *P. lunatus* by Dr. R. W. Allard, College of Agriculture, University of California, Davis, Calif.

[73] In both cases the planter carried two bags (*morrales*), one containing maize seed, the other, beans.

252 *Squash foods.*—Both common-squash and chilacayote are cut into pieces and boiled with the rind. Squash is often candied with piloncillo in mestizo towns nearby, but rarely in Indian communities. Squash blossoms (kukúmu, purú-ʧaʧáki) are boiled and eaten with salt and chile, and immature fruits are often stewed. Chilacayote, which has a watery, stringy flesh, is especially liked throughout the Tarascan area, and in the Sierra during the spring (when other vegetables are unavailable) it is eaten with an atole flavored with the nuríteni herb. In many pueblos the flesh is soaked in [273] water and permitted to ferment, forming a refreshing drink called *tepache.*[72] Finally, an atápakua, or stew of chilacayote, is often made by the Sierra Tarascans; the flesh is boiled with onion, silantro, and chile.

243 **Other native crops.**—Apart from the maize-bean-squash complex, a few other indigenous cultigens are found in modern Tarascan field agriculture. From the point of view of culture history, one of the most significant of these is amaranth (*Amaranthus cruentus*), which in most parts of Mexico is called *alegría* or *bledo* and in Tarascan, pani. The tiny (1 mm. diameter), round seeds, which occur in spikes at the head of the plant (1½–2½ meters tall), are rich in starch and oil. Sauer (1936) has suggested amaranth as one of the pre-maize cultigens of southern North America. Today it is cultivated in small amounts in many parts of central Mexico, usually in isolated Indian pueblos.

Among the modern Tarascans, especially those of the Sierra, three varieties of amaranth are grown: white, red, and black. Cultivation is usually limited to *t'upúri* soils of the highlands and to the house-lot gardens. It is planted both in plowland and in *desmontes*, but only in small patches within or at the edge of maize fields.[73] In the plowland the small grain is planted in *quemazones*. The log (usually oak) is burned in January and the seed planted in late May, immediately before the rains. The seed is also sown in freshly burned *desmontes*, but in the house lots ash fertilizer is rarely used. All three varieties

[72] Tepache is a general name for a number of drinks common to western Mexico, e. g. *tepache de piña, de silacayote*, etc. To make *tepache de silacayote*, the flesh of the squash is placed in an olla; water, piloncillo, and often soda water (*carbonate*) are added. Fermentation sets in immediately, and after 3 days the beverage is ready for consumption. After the first olla of *tepache* is consumed, more water, etc. is added to the flesh and the process repeated. The most of one chilacayote is said to last 1 year of repeated fermentation.

[73] Fields of *alegría*, similar to those around Tulyehualco at the southern edge of the Valley of Mexico, are never seen in the present Tarascan area.

243 are planted together, the seeds being separated according to color after the harvest. The plant is cut with a sickle in November or December, the grain threshed in an open space in the fields and stored in small ollas in the troje.

The cultivation of amaranth is disappearing among the Tarascans; it would probably die out rapidly if women did not constantly remind men to plant it every year. In some Sierra pueblos it is no longer grown, but grain is brought in from [438] other towns, particularly from Pamatácuaro and its surrounding ranches and from Capacuaro.[77] Little is grown in the Lake towns or in La Cañada, the grain being imported from the Sierra. In a few pueblos it was claimed that *alegría* was neither cultivated nor eaten: Paracho, Huánsito, San Jerónimo, Puácuaro, Napízaro.[78]

262 In terms of quantity consumed, amaranth has little importance in present Tarascan diet. Its significance lies in its relict position in Indian culture. Today the most widespread amaranth 252 food among the Tarascans is a tamal called "ʒ'apáta," made from a mixture of ground maize and *alegría*. Blue or black ekuáru maize is dry-ground on the metate; red or black *alegría* is then ground into the maize flour; a sweetening (piloncillo) and water are stirred into the mixed flour, and the resultant dough is wrapped in maize husks and boiled in an olla. In some pueblos of La Cañada ground *alegría* is mixed with wheat flour and piloncillo, of which tamales called ʒ'apátas de trigo are made. Moreover, *bolitas*, confections made of white amaranth, are made, but are more common in adjacent mestizo towns. The grain is toasted on the *comal*, then mixed with honey or a paste of piloncillo to make small cakes. These are commonly sold at fairs or on fiesta days.[79] Few ceremonial or religious uses of amaranth were found in the Tarascan pueblos.[80]

[77] Curiously, the Sierra pueblos which no longer cultivate *alegría*, but import grain for home use, are some of the more isolated, such as Urapicho, Cocucho, Nurio, and Pomacuarán. In these towns no reason was given for not growing *alegría*. Possibly the inhabitants found it less bothersome to buy the grain than go to the trouble of raising it.

[78] Modern amaranth cultivation extends beyond the present limits of Tarascan speech in Michoacán. It is still grown and used in the former indigenous towns of Apo, Tzaztzaro, Sirahuén, Opopeo, and in some mestizo ranches north of Uruapan.

[79] In Pamatácuaro an atole is made of amaranth and black maize. Such atole is widespread in the highlands of northern Guerrero (Hendrichs 1945-46, vol. 1, p. 35); and is probably encountered in other indigenous areas of Mexico. In Atapan a pakáa (ground grain boiled in water to a solid mass) is made of red *alegría*.

[80] In Pamatácuaro atole of black *alegría* and black maize is taken especially at the maize planting celebrations. In Sicuicho ʒ'apátas are eaten at both the maize planting and harvesting fiestas. In other pueblos special uses of amaranth were denied.

243 tion.[87] Owing to dry conditions and usually poor
[132] soils, yields are low. The infrequent light winter rains (*cabañuelas*) often determine the success or failure of the temporal crop. Another wheat type, a white soft variety, is called *"trigo de aguas"*; sown in June or July and reaped in November or December, it is seen in all parts
[312] of Tarasca. Most of the wheat crop of La Cañada is irrigated, being sown on the valley flats in December and harvested in May.[88] In the Sierra wheat is relegated to the less fertile slope land and *desmontes*, where it is rotated with maize. In the lake area and the northern plateau towns, where the grain is likewise a rotation crop, it is cultivated on both plains and slopes. It is occasionally sown in the house-lot gardens in all parts of Tarasca.

Primitive European methods are used in wheat cultivation (pl. 6). Land is prepared by plowing with oxen, and seed is sown broadcast and covered with a brush harrow. Grain is cut with the sickle (*hoz*), bundled and tied by hand, and threshed in the *era* (an open arena floored with stone or packed earth) located in the town or in the field. Threshing is accomplished by driving mules or burros over the bundles of wheat, but where sufficient animals are lacking, it is done by flailing. The grain is separated from straw and chaff with the tarákua, or wooden spade. All straw is carefully saved for animal feed. (Engine-powered separators are just beginning to appear in the area.)

252 One of the most interesting aspects of wheat
262 culture among the Tarascans is the varieties of food prepared from both metate-ground and milled flour. Those made from grain wet-ground on the metate include *tortillas de trigo*, a common food in La Cañada, but eaten on fiesta days (e. g. Corpus) in the Sierra towns.[89] In Charapan the tortillas are thin, round cakes often 1 to 1½ feet in diameter, which are cooked on the comal. Thicker tortillas, or *gordas*, are similarly made, but browned on the coals.[90] For the Corpus fiestas *gordas* (pirɾ̃čis) ¾ to 1 inch thick and shaped like

[87] For example, most temporal wheat in the Lake region is harvested in early April, while in the Sierra ripening is retarded until May. In Cumachuin, the highest pueblo in the Sierra, harvest occurs in the first weeks of June.

[88] The *tripulas*, or wheatfields, are watered three times annually, at the end of January, first of March, and at the end of March. Pan irrigation technique is used.

[89] In the Lake towns of Ihuatzio and Janitzio metate-ground wheat dough is mixed with nixtamal (maize dough) to make a tortilla called ištakata.

[90] Beals (1946, p. 83) mentions that in Cherán *gordas de trigo* are fried in deep pork fat. This procedure was not encountered in other Tarascan towns.

252 262 animals (birds, rabbits, pigs) are made in some Sierra towns. In La Cañada, however, such figures are prepared from leavened flour dough and baked in the oven.[91] Another wheat food, which is eaten particularly during and immediately after the wheat harvest, is called pakésa. Wheat grains are roasted on the comal, then dry-ground on the metate. The coarse flour is cooked in boiling water flavored with salt or piloncillo. The resultant dough is eaten hot or cold. Moreover, a wheat pozole (whole grains stewed with meat, chile, *tomate*, etc.) is prepared in the Lake and La Cañada areas, but rarely in the Sierra. Again, a wheat atole (trígukamáta) is found in all parts of Tarasca. Various types of bread, called *cemitas* or auákatas are also prepared from metate-ground wheat, usually by professional women bakers. The dough is often sweetened and the breads variously shaped (round or diamond). The dough is baked in the dome-shaped Spanish oven, several of which are found in every Tarascan village. Unsweetened ceremonial breads (kanákua), 1½ feet in diameter and 2 or more inches thick, are made on the Saint's day in some Sierra pueblos.

Wheat foods are also prepared from flour, milled in the larger mestizo towns nearby. A bread called kurínda is baked in the Spanish oven in most pueblos. In La Cañada and the Lake towns tamales (prepared like those of maize) and tortillas are made from wheat flour.[92] Buñuelos, a special dish prepared from wheat flour, are eaten ceremonially or as an occasional treat in all parts of Tarasca. The dough, mixed with tequisquite (a lime compound), salt, and boiled green tomatoes, is thinned into flat cakes by placing on the knee, patting and pulling at the edges. The sheets of dough are cooked in boiling lard in a *casuela*. In the Sierra both men and women prepare and cook *buñuelos*, which are eaten only on certain holidays. Often on ordinary occasions this food is soaked in a sirup of piloncillo and eaten with white atole in the Lake area.

243 *Barley cultivation.*—Small amounts of barley are cultivated in most parts of Tarasca, but primarily in the Sierra, for animal feed. The grain is sown in June and harvested in November and

[91] Formerly in Charapan large pirijis, shaped like human figures 2¼ feet high, were given at weddings to the bride as a token of fertility.

[92] *Tamales de trigo* are also seen in the large markets (Uruapan, Paracho), where they are customarily taken with atole. In Paracho they are called ísapi-k.urínda or ísapiti-ukári.

raw (when aged or *pasado*) or, more recently, cooked on Easter, and sometimes on the village saint's day are distributed to all inhabitants at the end of the fiesta.[101] Moreover, cacao beans were formerly an important trade article imported into the upland pueblos. In most households in the Sierra the beans were roasted on the *comal* and then wet-ground on the metate. Mixed with piloncillo and cinnamon, the chocolate "dough" was made into small disks (2 in. diameter), called k'ékua. A chocolate drink is made by dissolving the k'ékua in hot water. A few storekeepers still make disks from ground chocolate purchased from mestizo wholesalers. Today chocolate is taken principally on fiesta days, and is often served to visiting strangers. Other tropical fruits, such as the common banana, mango, pineapple, mamey, chicozapote, zapote prieto, etc., are brought into the Sierra in season. They are eaten at all times and appear to have no ceremonial significance. Pineapple is used for a fermented beverage, *tepache*.

Specialized truck gardening.—This is a more recent type of horticulture among the Tarascans. They have adopted intensive commercial production of vegetables in only a few well-watered spots near large mestizo markets. The most notable truck gardening district has developed on the narrow stretches of lacustrine soil along the shores of Lake Pátzcuaro, where irrigation is practiced. Although water is carried in buckets to some of the smaller gardens (e. g., in Puácuaro), most of the vegetable plots are irrigated with the t'apáratarákua, or *pala*, possibly a pre-Columbian invention.[102] This instrument consists of a wooden spoonlike container fastened to a long pine pole, which, resting on a crosspiece, is used like a lever to scoop water from ditches or wells (fig. 4; pl. 7). Along the wide western shore of Pátzcuaro shallow ditch wells are dug down to the water level (5 to 6 ft. from the surface), from which water is scooped and distributed to vegetable plots by a system of small canals. Along the narrow shores of the Tarıfu-k'éri Peninsula (where the water table is low) small canals have been constructed to permit lake water to flow into a ditch well, from which the water is lifted with the *pala* to high levels. In

[101] The latter custom was reported from Charapan and Patamban.

[102] The provenience of the *t'apáratarákua* is not clear. Its mention has not been encountered in colonial documents; the Relación de Michoacán (p. 25), however, speaks of irrigated maize, presumably around Lake Pátzcuaro. Today the *t'apáratarákua* is used also at Tarejero, in the basin of Zacapu.

231 house lot. Droves of pigs are never mast-fed in the forest. Hogs are fattened on corn and sold; as pork is well liked, they are often killed for food and for lard, now indispensable in European-modified Indian cookery.

Other animal domesticates include fowls and bees. The turkey (kurúka),[111] the only native domesticated fowl in the area, is more common in mestizo towns than in Tarascan villages. The European chicken (ɸíkata,)[112] however, is ubiquitous; practically every Indian household has a flock of five or six. A single breed, probably descendent from the Spanish fowls introduced early in the 16th century, predominates.[113] Improved breeds have penetrated only into large mestizo towns on the edge of the indigenous area. Several families in every Tarascan pueblo keep a few hives of European bees in the house lot. Hives consist of rows of small wooden rectangular boxes placed on benches (pl. 7). In some Sierra villages (e. g. Capacuaro) native bees hive in sections of logs hung on the outside wall of the [263] house. Both honey (for sweetening) and wax [237] (for religious candles) are extracted from the hives in November or December.

Animal foods in Tarascan diet.—Tarascans eat 262 meat whenever it is available and can be afforded. 252 Chunks of boiled beef are one of the chief ingredients of čurípu. This dish is also made of the heart, liver, intestines, and lungs. Other beef dishes prepared in most Tarascan pueblos are: a stew, or atápakua, thickened with *mole;* uiríkata, or meat broiled over charcoal or on the *comal*; various cuts fried in the *casuela*; *menudo*, or stomach lining boiled and served with ground chile; dried salted meat (*cecina*); steamed beef heads (including tongue and brains), called *virría* or *babaqua*.[114]

[235] Neither cow nor goat milk is popular among Tarascans. Some milk cows are kept in the larger villages to supply the pregnant and the sick. Little cheese is made locally, most being brought in from the *tierra caliente*.

Although well liked by most Tarascans, mutton

[111] The word kurúku is apparently onomatopoeic; ɸíkata-ambás or "good chicken," is also used as a name for turkey.

[112] The word "ɸíkata" is Tarascan for a wild grouse, and was evidently applied to the chicken soon after its introduction.

[113] Hens are small, dull brown, often speckled with yellow and black; cocks are reddish brown with highly colored tail, wing, and neck feathers.

[114] Some of the above Tarascan words are also applied to stews and roasts of deer meat. With the possible exception of čurípu, uiríkata, and atápakua, all meat dishes prepared by modern Tarascans are of Spanish origin.

262 is eaten only on Sundays or on fiesta days by those who can afford it. On festive occasions, such as 252 weddings, a whole mutton is stuffed with cleaned entrails and head and roasted in a large oven. (The roast is called *tatemado*, or uirĺkata.) On less prominent occasions pieces of mutton are often cooked with vegetables to make a kind of čurípu.

Pork is always eaten fresh; cured pork, such as ham, bacon, and sausage—all old Spanish meats—, has no place in modern Tarascan diet. Pieces of fresh pork are fried on the *comal*, or boiled with vegetables. A popular pork dish, especially in the Sierra, is *chicharrones* (cracklings), which consist of pieces of fresh pig skin well-cooked in a large copper caldron.[115] *Carnitas*, pieces of meat and fat, including spareribs, side meat, leg, etc., are also cooked in the caldron in many pueblos, and are commonly served in the markets of the large mestizo towns nearby.

FOOD-GATHERING ACTIVITIES

222 Tarascan women and children gather various 262 wild herbs, fungi, and fruit to supplement agricultural products. Among these the most important are the annual greens, or šakuá,[116] collected during the rains from June through September. They are usually found in disturbed ground, e. g. within and on the edges of wheat or maize fields. The women in some Sierra pueblos recognize more than 15 varieties of šakuá that are habitually gathered.[117] These are boiled with chile and [252] salt to make atápakua. Although eaten in all modern Tarascan villages, such greens are of greater importance in the Sierra, where the garden vegetables common in the Lake and La Cañada areas are infrequently cultivated.

Mushrooms (terékueča) are collected in all Tarascan towns, and, like the annual greens, appear only in the rainy season. They are found in the fields, in the forest growing under decaying logs,

[115] In the spring of 1946 a *chicharrón* cooking was observed in Pamatácuaro. After killing a hog the local butchers or others set up a caldron in the plaza to cook the skin. By the time the cracklings were well done, a large group of villagers had gathered to buy them at a few centavos each. The lard so rendered was sold to one of the local stores. The cooking of *chicharrones* is also common in many mestizo towns in central and northern Mexico.

[116] Šakuá is the Tarascan equivalent of the Nahuatl "quelitl," which has been hispanicized to *quelite*, the general term now used in Mexico for any kind of wild annual used for greens.

[117] Unfortunately, the Sierra was visited during the dry season, and consequently specimens of šakuá plants could not be collected for botanical classification. Verdolaga (*Portulaca oleracea*) and tender amaranth shoots, however, are common šakuá varieties.

227 and even in sheltered spots in the village streets.
262 Again, collecting is done by women and children, though men may bring home a mess of mushrooms found while cutting wood. Eight to ten edible varieties are known in most towns. Children are trained early to recognize the poisonous kinds, called uaníč-terékua (ghost mushroom). Terékueča are prepared by boiling and then frying
[252] in lard; they are also roasted with salt on the *comal* or over live coals; sometimes they are boiled and mixed with chile sauce. A *tamal* nákatamal-terékua) is often filled with boiled mushrooms. Aside from mushrooms, the fungus growth on maize ears is likewise called terékua (the *cuitlacoche* (*Ustilago maydis*) of the Aztecs), and is similarly prepared and eaten.

In the Sierra acid fruits, particularly berries, are other food items collected. The fruit of the native blackberry bush (*zarzamora*, ȼ'tún), which grows best in disturbed ground along hedgerows and on edges of fields, is gathered in May and June. The berries are eaten fresh with salt and are used to flavor atole (*atole de zarzamora*, ȼ'tún-kamáta). Other fruits commonly gathered include piníki, an orange-colored berry often carried to mestizo markets; *tejocote* and *capulín*, both gathered wild or semicultivated in hedgerows; wild grapes; the cherry tomato (šapíndikua), which grows along the edges of cultivated fields.

The buds (šamáš) of a wild *mezcal* type of agave is another food item commonly gathered in the Tarascan area and in most parts of Central Mexico. The buds and lower fleshy ends of the
262 leaves of the plant are roasted in a hole about 1
252 meter deep and 1 to 2 meters across, which is usually dug on the forested slopes where the wild agave is available. A fire is built in the hole, and after it has died down somewhat rocks are placed on top. When the stones become hot, the agave is placed in the hole and covered with maguey leaves and earth. After 3 days the cooked agave is taken out and carried to various markets where it is sliced and sold. Roasted agave is often termed *mezcal* (siuáta), but it must be distinguished from the distilled liquor (s'áku) of the same name. The former is rich in starch and is possibly one of the more ancient foods of Mexico.

Aside from food plants, the coarse roots of
227 zacatán grass (*Muhlenbergia macroura*) are collected by men throughout the Sierra. Called *raíz de paja* or *raíz de zacatón*, the dried roots are sold in

4: West K-5 (1946) 1948 NU34 Tarasco NU34
[P. 55-d] Pátzcuaro Sierra

226 another without permission from the authorities of the latter.

252 **Fish preparation.**—*Pescado blanco*, *trucha*, and akúmaja are usually taken to market fresh, although the latter is sometimes fried on the *comal* before being sold. The tiny k'uerépu and č'arári, however, are invariably sun-dried, the catch being spread on a petate, which is placed near the door of the dwelling where it can be easily watched [439] (pl. 11). Since pre-Conquest days dried č'arári has been one of the main exports of the Tarascan lakes. It was distributed into the *tierra caliente*, the Sierra, and as far east as Toluca.

LUMBERING ACTIVITIES

313 The Tarascans, possibly more than any other aboriginal group of Mexico, have been exploiters of forest products since pre-Columbian times. During the Empire period one of the important officials of the *caltzontzin* at Tzintzuntzan was in charge of "the keepers of the forests," who cut beams and made planks for public, and probably private, use.[136] Not only were large beams and logs used in the construction of temples, but also in the building of forts against Aztec raids. During the colonial period the pine forests on the northern flanks of the Sierra de Ozumatlán were heavily exploited by Tarascan woodmen for beams, planks, and shakes for the Guanajauto and Zacatecas mining districts.[137]

Much of the timber resource of northern Michoacán was depleted by the end of the 18th century. Relatively untouched by colonial exploitation, the pine and fir forests of the Sierra de los Tarascos, although constantly diminishing, have remained the principal source of timber for the indigenous population. There are few contemporary Sierra Tarascan men who cannot handle an ax or lumber saw. When the maize fields do not demand their attention, the family head and his sons are usually in the forest cutting timber or gathering resin. The Sierra Indian is consequently both a farmer and a lumberjack. Some are professional woodsmen, who live in the village but seldom engage in agriculture. Little lumber-

[136] Relacion de Michoacán, p. 17: ". . . *diputado sobre los que guardaban los montes que tenian cargo de cortar vigas y hacer tablas y otra madera de los montes . . .*"

[137] This exploitation began immediately after the Guanajuato mines were opened ca. 1554, and extended into the post-colonial period. After the exhaustion of the local wood supply, Zacatecas began to draw on the northern Michoacán lumber reserves during the first part of the 17th century (Bancroft, 1886, vol. 1, p. 312).